KURANO et al. -- 09/645,619
Attorney Docket: 008312-0273762

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.   (Currently amended) A multichannel recording device configured to record data on a disk-shaped recording medium that includes an object area in which object data corresponding to programs are recorded and a management area in which management data is recorded, said multichannel recording device comprising:

receiving means for simultaneously receiving a first program and a second program, which are different from each other;

encoding means for encoding the first and second programs in parallel so as to obtain object data corresponding to the first and second programs;

recording means for alternately recording the object data, obtained by the encoding means and corresponding to the first and second programs, in the object area of the disk-shaped recording medium such that the object data are recorded based on a data length that enables continuous data reproduction;

reproduction means for reproducing the object data which the recording means records in the object area; and

control means for recording the management data in the management area of the disk-shaped recording medium, wherein the management data controls the reproduction means to reproduce the first and second programs in an order determined by channel numbers or recording start times, wherein said specified data length unit is a CDA unit and the control means records reproduction management data in the management area of the disk-shaped recording medium, separate from the management data for managing the object date, and the reproduction management data controls the reproduction means to reproduce the first and second programs in an order determined by channel numbers or recording start times.

2.   (Currently amended) A multichannel recording device configured to record data on a disk-shaped recording medium including an object area in which object data corresponding to programs are recorded and a management area in which management data is recorded, said multichannel recording device comprising:

2

KURANO et al. — 09/645,619
Attorney Docket: 008312-0273762

receiving means for simultaneously receiving a first program and a second program, which are different from each other;

encoding means for encoding the first and second programs in parallel so as to obtain object data corresponding to the first and second programs;

recording means for alternately recording the object data, obtained by the encoding means and corresponding to the first and second programs, in the object area of the disk-shaped recording medium such that the object data are recorded based on a data length that enables continuous data reproduction;

reproduction means for reproducing the object data which the recording means records in the object area; and

control means for recording the management data in the management area of the disk-shaped recording medium, wherein the management data controls the reproduction means to reproduce a requested program, the requested program being one of the first or second programs, wherein said specified data length unit is a CDA unit and the control means records reproduction management data in the management area of the disk-shaped recording medium, separate from the management data for managing the object date, and the reproduction management data controls the reproduction means to reproduce a requested program, the requested program being one of the first or second programs.

3.   (Currently amended) A multichannel recording method for recording data on a disk-shaped recording medium that includes an object area in which object data corresponding to programs are recorded and a management area in which management data is recorded, said method comprising:

simultaneously receiving a first program and a second program, which are different from each other;

encoding the first and second programs in parallel so as to obtain object data corresponding to the first and second programs;

alternately recording the object data obtained by the encoding of the first and second programs in the object area of the disk-shaped recording medium such that the object data are recorded based on a data length that enables continuous data reproduction;

reproducing the object data recorded in the object area; [[and]]

controlling the recording of the management data in the management area of the disk-shaped recording medium in which the management data controls the reproduction of the first

3

KURANO et al. -- 09/645,619
Attorney Docket: 008312-0273762

and second programs in an order determined by channel numbers or recording start times;
and

controlling the recording of reproduction management data in the management area of the disk-shaped recording medium, separate from the management data for managing the object data, wherein the reproduction management data controls the reproduction of the first and second programs in an order determined by channel numbers or recording start times, wherein said specified data length unit is a CDA unit.

4.   (Currently amended) A multichannel recording method for recording data on a disk-shaped recording medium that includes an object area in which object data corresponding to programs are recorded and a management area in which management data is recorded, said method comprising:

simultaneously receiving a first program and a second program, which are different from each other;

encoding the first and second programs in parallel so as to obtain object data corresponding to the first and second programs;

alternately recording the object data obtained by the encoding of the first and second programs in the object area of the disk-shaped recording medium such that the object data are recorded based on a data length that enables continuous data reproduction;

reproducing the object data recorded in the object area; [[and]]

controlling the recording of the management data in the management area of the disk-shaped recording medium in which the management data controls the reproduction of a requested program, the requested program being one of the first or second programs; and

controlling the recording of reproduction management data in the management area of the disk-shaped recording medium, separate from the management data for managing the object data, wherein the reproduction management data controls the reproduction of a requested program, the requested program being one of the first or second programs, wherein said specified data length unit is a CDA unit.

5.-10.   (Canceled)

11.   (Previously Presented) A multichannel recording device according to claim 1, wherein while the digital data constituting said first and second programs are being

4

KURANO et al. -- 09/645,619
Attorney Docket: 008312-0273762

alternately recorded on said disc-shaped recording medium using said specified data length unit, if there is an area in the recording direction where other data are recorded, said control means skips the area during the recording.

12.   (Previously Presented) A multichannel recording device according to claim 2,
      wherein while the digital data constituting said first and second programs are being alternately recorded on said disc-shaped recording medium using said specified data length unit, if there is an area in the recording direction where other data are recorded, said control means skips the area during the recording.

13.   (Previously Presented) A multichannel recording method according to claim 3, wherein while the digital data constituting said first and second programs are being alternately recorded on said disc-shaped recording medium using said specified data length unit, if there is an area in the recording direction where other data are recorded, the area is skipped during said recording.

14.   (Previously Presented) A multichannel recording method according to claim 4, wherein while the digital data constituting said first and second programs are being alternately recorded on said disc-shaped recording medium using said specified data length unit, if there is an area in the recording direction where other data are recorded, the area is skipped during said recording.

15.-22. (Canceled)

5